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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,690	08/07/2001	Toshiyo Ogino	P 282667 60198-US-SUS	8760
909	7590	09/30/2002	EXAMINER	
PILLSBURY WINTHROP, LLP P.O. BOX 10500 MCLEAN, VA 22102			CUEVAS, PEDRO J	
		ART UNIT	PAPER NUMBER	
		2834		
DATE MAILED: 09/30/2002				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/922,690	OGINO ET AL.
	Examiner	Art Unit
	Pedro J. Cuevas	2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on _____.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-18 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
 5) Claim(s) ____ is/are allowed.
 6) Claim(s) 1-18 is/are rejected.
 7) Claim(s) ____ is/are objected to.
 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 11) The proposed drawing correction filed on ____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) The translation of the foreign language provisional application has been received.
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____.
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,6. 6) Other: _____.

DETAILED ACTION

Drawings

1. Figures 8, 9, 10A, 10B, 11, 12, 13A, 13B, 14A and 14B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Phase Voltage Controlled Voltage Regulator Of Vehicle AC Generator.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 8-10, and 13-18 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,093,583 A to Mashino et al.

Mashino et al. clearly teaches the construction of an electric power supply system for automobile including:

a rotor having a plurality of magnetic poles and a field coil (12) for polarizing said plurality of magnetic poles,
an armature (10) having an armature core with a plurality of phase windings for generating AC voltage under the influence of rotating magnetic field provided by said rotor,

a pulse detecting means (Figure 1) for detecting the number of frequency or pulses of said output signal of said comparator, wherein said field coil is energized to polarize said plurality of magnetic poles if the number of frequency or pulses of said input signal is the same as or larger than a predetermined level, and

a full-wave rectifier (11) for converting said AC voltage into DC voltage, said voltage regulator comprising:

a phase voltage input terminal (Figure 1) connected to one of said phase windings;

a phase-voltage-detection circuit / a sub-power circuit (Figure 1), connected to said phase voltage input terminal, for detecting phase voltage of said one of said phase windings and generating a rotation signal if it detects said phase voltage;

a main power circuit (Figure 1), connected to said sub-power circuit, for supplying power;

a field current switching element (Figure 1) connected to said field coil;

a voltage control circuit (13), connected to said main power circuit, for monitoring the output voltage of said full-wave rectifier and generating a control signal that controls said field current switching element so that said output voltage of said full-wave rectifier can be controlled at a prescribed level;

wherein said phase-voltage-detection circuit / sub-power circuit comprises:

a comparator (Figure 1) having a first input terminal connected to said input terminal and a second input terminal, and means, connected to said second input terminal, for providing a variable threshold level varying with said phase voltage,

an integration circuit having an output terminal connected to said first input terminal, for providing a mean value of said phase voltage,

a peak hold circuit having an output terminal connected to said second input terminal of said comparator, for detecting peak values of said one of phase voltage,

a second comparator having a first input terminal connected to said phase-voltage- input terminal and a timer circuit 82 connected in series with said second comparator for providing a certain interval before a next phase voltage,

a second resistor,

a switching element connected in series with said second resistor,

a third comparator having a first input terminal connected to said phase-voltage-input terminal for controlling said switching element.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-7, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,093,583 A to Mashino et al. in view of common knowledge in the art.

Mashino et al. discloses the claimed invention except for:

the variable threshold level correspondence value,
the crossing value and frequency per cycle,
the frequency value of the voltage regulator, and
the field current supply period.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to select the claimed range of values for the variable threshold level correspondence value, crossing value and frequency per cycle, the frequency value of the voltage regulator, and the field current supply period since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to select the claimed values for the variable threshold level correspondence

value, crossing value and frequency per cycle, the frequency value of the voltage regulator, and the field current supply period since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

It would have been an obvious matter of design choice to select the claimed ranges and set the claimed values since the applicant has not disclosed that those ranges and values solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with any appropriate working values depending on system capacity and operation.

It should be emphasized that “apparatus claims must be structurally distinguishable from the prior art.” MPEP 2114. In re Danly, 263 F. 2d 844, 847, 120 USPQ 528, 531 (CCPA 1959) it was held that apparatus claims must be distinguished from prior art in terms of structure rather than function. In Hewlett-Packard Co v Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990), the court held that: “Apparatus claims cover what a device is, not what it does.” (emphases in original). To emphasize the point further, the court added: “An invention need not operate differently than the prior art to be patentable, but need only be different” (emphases in original). That is, in an apparatus claim, if a prior art structure discloses all of the structural elements in the claim, as well as their relative juxtaposition, then it reads on the claim, regardless of whether or not the function for which the prior art structure was intended is the same as that of the claimed invention.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (703) 308-4904. The examiner can normally be reached on M-F from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R. Ramírez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Pedro J. Cuevas
September 25, 2002



NESTOR RAMIREZ
SUPPLEMENTAL EXAMINER
TECHNICAL CENTER 2800